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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,598	01/10/2002	Masaharu Tanai	10830-086001 / A36-140981	6364
26211	7590	12/14/2004	EXAMINER	
FISH & RICHARDSON P.C. CITIGROUP CENTER 52ND FLOOR 153 EAST 53RD STREET NEW YORK, NY 10022-4611			NGO, CHUONG D	
			ART UNIT	PAPER NUMBER
			2124	

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/043,598

Applicant(s)

TANAI, MASA HARU

Examiner

Chuong D Ngo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☒ Claim(s) 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 1, line 5, "the FFT data" lacks a proper antecedent basis; it appears to be --the data--.

As per claim 2, it is unclear whether "the FFT processing", line 3, refers to the "FFT processing" in claim 1, line 1, or the "FFT processing" in claim 1, line 5.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6 and 9-14 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Gentleman (3,617,720).

As per claims 1,2,3,9, Gentleman discloses in the figure an FFT processing system having a Bulk storage unit (30), an FFT unit (50), a high-speed access memory (40A-B), a dividing section (20), a first transfer section (80A), and a second transfer section (80A-B) with data rearranging as claimed (see col. 3, line 57, and col. 4, line 51- col.5, line 65).

As per claims 3 and 4, each of the past memory 40A and 40B is corresponding to a bank, or column address memory.

As per claim 10, Gentleman also discloses FFT having a first (eq.3) through nth (eq.4) sections/stages.

As per claim 11,12, Gentleman also discloses M (64) first FFT processing sections (each corresponding to a process of a 4,096-point file, see col.4, line 57- col.5, line 10), and K (4,096) second FFT transforms (each corresponding to a 64-point transform, see col. 5, line 20).

As per claims 5,6,13,14, Gentleman also discloses in the figure a rotator table (70).

4. Claims 7 and 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gentleman (3,617,720).

It is noted that Gentleman does not disclose the omission of the processing of imaginary data as claimed since Gentleman discloses the system for signal analysis by FFT processing on data points, each point generally a complex numbers (see col. 3 lines 62-66). However, since a real number is a complex number with imaginary part equals zero, it would have be obvious to a person of ordinary skill in the art to apply the teaching of Gentleman in analyzing signal that contains all real number as in a real signal analysis in order to reduce the time for data

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accessing. Further, since real numbers do not have imaginary parts, a person of ordinary skill in the art, when apply the teaching of Gentleman in a real signal analysis, would have found it obvious to omit the processing of imaginary data part in order to reduce the processing time.

5. Claims 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 8 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuong D Ngo whose telephone number is (571) 272-3731. The examiner can normally be reached on Tuesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (571) 272-3719. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Chuong D Ngo  
Primary Examiner  
Art Unit 2124

12/03/2004